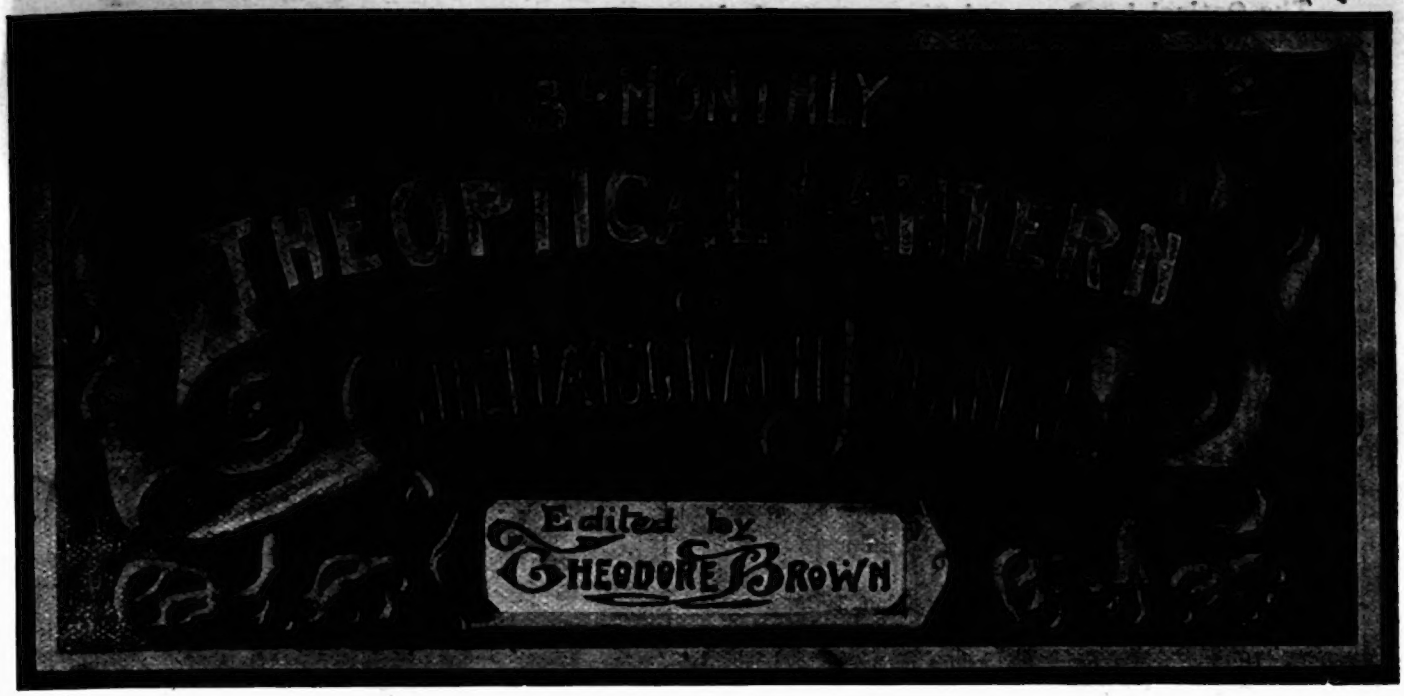
PP 1912 ffa



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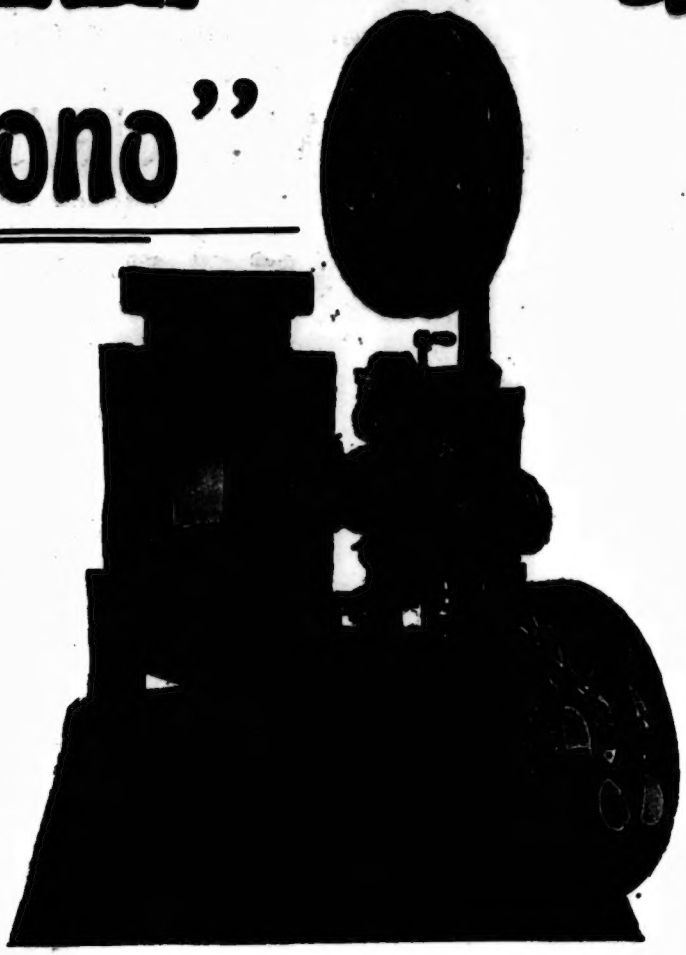

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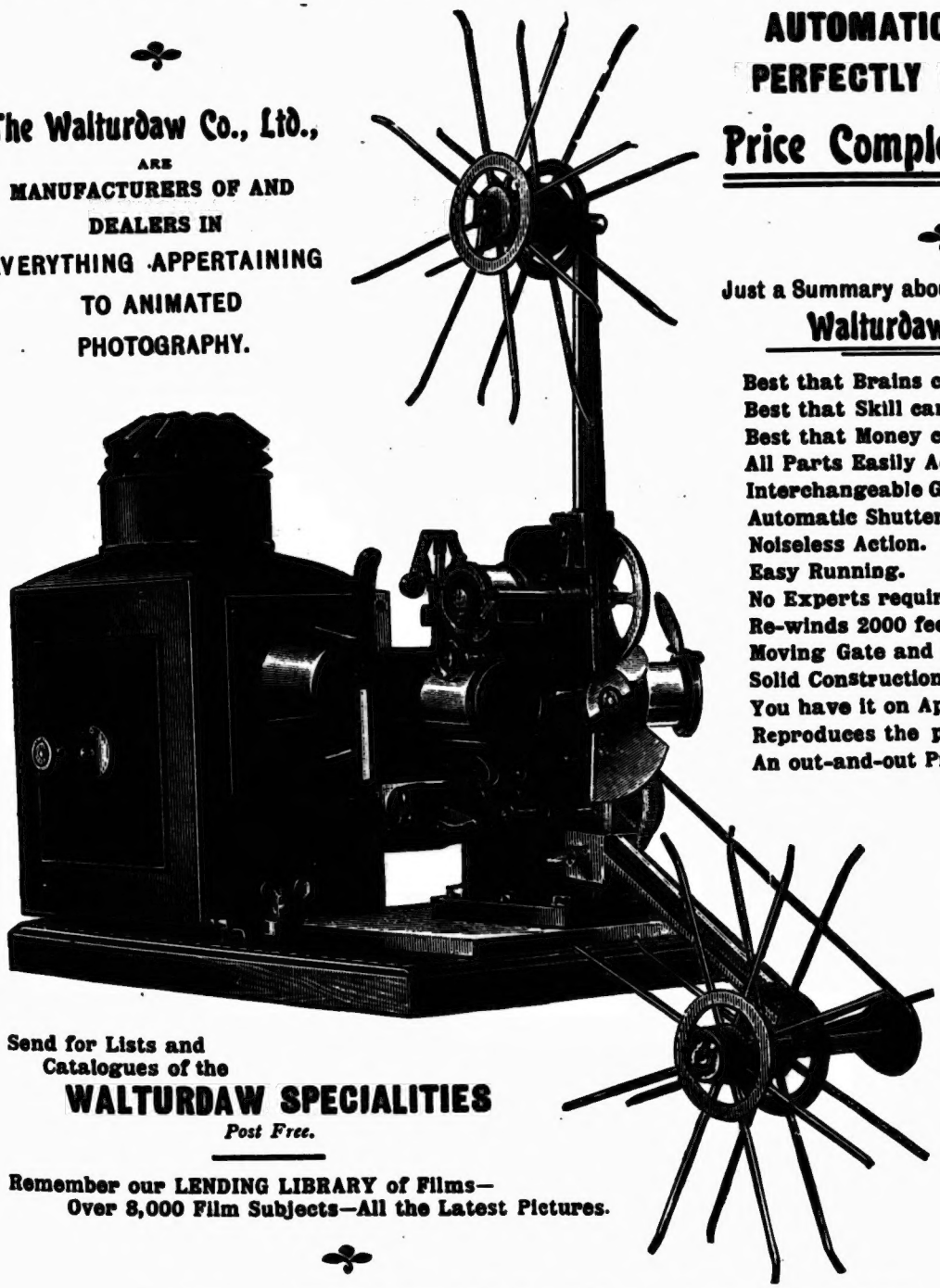

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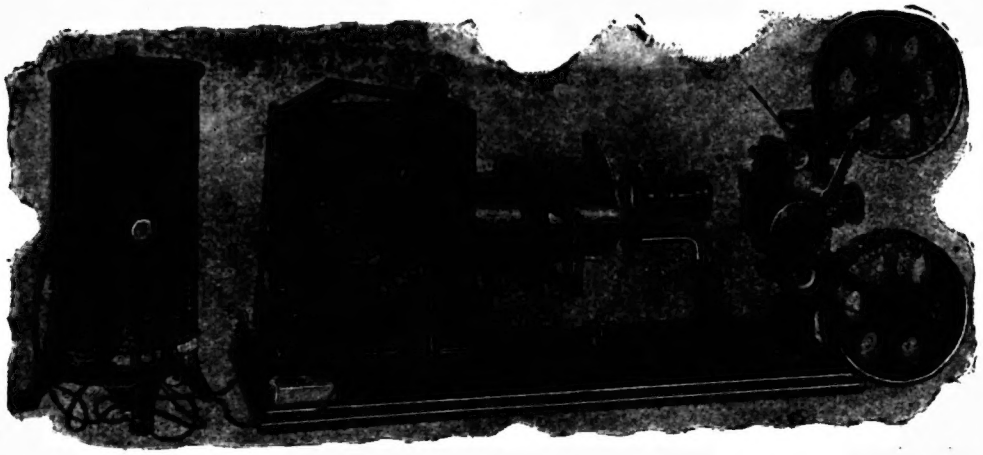

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WHILST in certain quarters there has been a decided advance in the quality and perfection of Living Picture Shows during the past month, we regret others not worthy of the name have come under our notice. We refer especially to the "hodge podge" exhibitions given in several of the provincial halls by inexperienced showmen. The general public are not hard to please; but when they are asked to pass, without objection, "Raining Pictures" (scratched films), "Ragged Spacing," and images of the carbon taking part with the picture, we are not surprised, and indeed should encourage the "hiss." We cannot help thinking that it would be good for the trade, and for the reputation of living pictures, if Dick, Tom and Harry could be restrained from palming off this rubbish upon the public.

It is evident that some sort of restriction is needed. If such restraint is not forthcoming from the local governing bodies, may we not at least, reasonably look to those who have the control of the film output, for a check of some sort on these undesirables? These so-called showmen have neither studied the fundamental principles of their business, nor given a moment's thought to the technicalities of the art they ape. Meanwhile, we seek to find what existing policy and methods of business make possible the existence of these bad shows and consequent disappointed audiences. Is it the instalment system of purchase, the film library and hire system? We are inclined to think it is; although we had observed the welcome changes of programme, as contrasted with the previous repetitions. But we cannot afford to make a sacrifice of so great importance as 'efficiency,' in order to secure a greater variation in our programmes. Not only so; there are the interests of the honest, persevering, and thoroughly experienced exhibitor to be considered; for it is he who forms the backbone of the whole business.

When inferior exhibitions are coupled with unfair competition, brought about by the too easy acquisition of films and apparatus, it is time the promoters of such developments thought seriously of this matter, and asked themselves at this stage, whether or not it would be wise to continue the system for which they are responsible. It is a bold stand to make, but we hear that one firm at least has decided to withhold its best film subjects from the market till a better and more desirable state of affairs exists. In view of what has already been said, we welcome this decision, feeling sure that in the long run the trade generally will benefit.

It would be useful if readers, and especially those intimately connected with the business, would express their views on the above subject through the correspondence columns of this journal. Here are questions that need answering:—What can be done to restrict the exhibition of living pictures to men who are fully qualified for the work? What are the principal evils that tend to hinder a profitable occupation in this direction? and what are the remedies to be applied?

Despite the varying imperfections of exhibitions in certain quarters, on the whole the living picture triumphs still, and continues in public favour. This is evinced by the audiences at the London theatres, who are not slow to show their appreciation of every new development. We think now especially of the programme provided at the Alhambra just recently, entitled "Living London." Considering the whole organisation of the so-called "Urbanora," any unprejudiced person in the auditorium would be impressed, not only with the well-nigh perfect system of presenting the pictures, but the genius displayed in combining *refined amusement* with *solid instruction*. What the eye could not see in the pictures, and what was necessary to a more complete understanding of the scenes, the ear took in, as Mr. Frank Stevens uttered in clear tones just those words of intelligence that aptly supplied the missing links; so that a more comprehensive display could hardly be imagined.

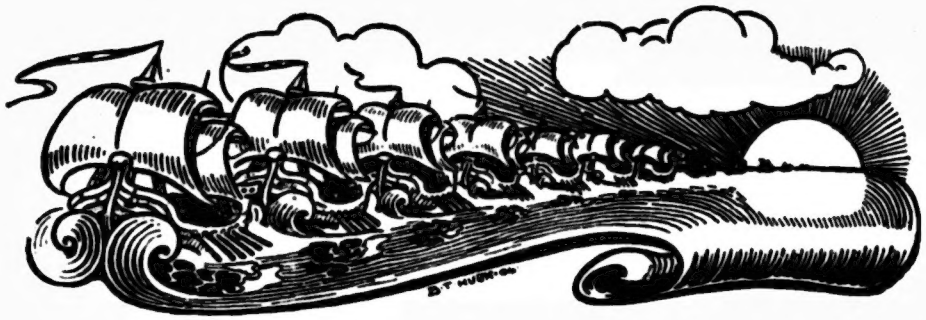
Exactly how the war pictures will be presented to the public we do not know at the time of writing these lines, but certain it is their disposal can well be entrusted to the hands of the Charles Urban Trading Company and the management of the Alhambra.

At a meeting of the Advertising Committee of Ventnor, recently, Mr. J. Morgan Richards' generous offer of £50 towards a scheme of advertising that holiday resort by means of lantern views, was discussed, but it was felt that nothing could be done by the committee till the project had reached another stage. We would like to suggest, not only to the committee at Ventnor, but to the committee of every sea-side watering place, that in the bloom of their seasons they commission one of the cinematograph firms to secure living pictures of especially selected subjects pertaining to their respective districts; and that such pictures be freely exhibited throughout the country by means of the agencies at hand. If exhibited at the theatres and music-halls of our cities, such pictures would be a pleasure to many who cannot afford a sea-side holiday; and to others more fortunate, a fruitful inducement to visit the places depicted.

The question of lantern exhibitions in churches has been discussed many times. The general failure, as at present felt, to fill the churches, and the chapels too, for that matter, has led to continued suggestions to get over this undoubted retrograde condition. The lantern has been tried, says *The Rock*, by one or two venturesome parsons, but apparently with no very appreciable results. Attending one of these Sunday evening lantern expositions in an old city church, we noticed a fair attendance (as numbers now go), and the pictures, thrown from the west organ gallery on a large sheet in front of the communion rails, came out very well. Mr. Stead approached General Booth on lantern use, but the veteran leader could not see his way to it. But Mr. Stead is sufficiently sanguine to expect to see the lantern in St. Paul's. The prejudice against the use of the lantern in churches partakes somewhat of the nature of our early prejudice against cycles and motor cars; but we are accustomed to these things now, and in church *custom* is responsible for many actions far more demoralising than the judicious use of lantern pictures.

Pictures and Politics in the West.—The entertainments given in connection with the country meetings are proving very popular adjuncts to the political speeches. The songs which Mrs. Pyne so ably renders are exceedingly welcome, while the cinematograph pictures shown by Mr. Pyne impart information on political topics, and are object lessons not easily forgotten. The picture of John Bull's fireside is very instructive. John is ousted from his fireside by Frenchman and German, Russian and American, who enter singly, and, seeing the words "Free Trade" over the mantelpiece, seat themselves comfortably round John's fire, leaving him with standing room only. While in this position a Colonial arrives, and with the help of John, turns out the foreigners from their position, and proclaims the victory of "Fair Trade" over "Free Trade." The objection to such pictures as this by political opponents, is the best recommendation for their continuance.

BRITISH MUSEUM



THE SCIENCE OF ANIMATOGRAPHY.

(By the Editor.)

Chapter III.

IN our last chapter we referred to the most suitable view point from which to take animatographs or living pictures; but it is necessary that something more should be added, for it is not only the lighting of a subject that is of importance for the best results, but also the particular field of view that the lens is made to cover.

Reference being made to Fig. 2, let us suppose that a procession we wish to take is to pass over the route from J to K, and in the procession there is to be a celebrity whom we wish shall take great prominence in our picture. Suppose also we have the option of choosing any position for our camera around the circumference of the circle in the diagram, the position of the sun being as indicated. The very worst position the animatographist could choose would be at point A. Here he would be photographing against the sun, and his resultant pictures would consequently be hazy, whilst the objects in the composition would appear little better than mere silhouettes. If he took up his position at D this would give better results, yet not the best; first, because the duration of time that the celebrity was in view would be very short, he would only be in the field of view whilst passing from M to N; and, secondly, because the shadows cast by the sun's rays, intercepted by the various objects, would fall perpendicular with the axis of the camera lens, and thus, to a very large extent, they would be hidden by the objects themselves. We all know that apparent relief and solidity in a picture is only present when the source of illuminant falls obliquely to the composition. At noon day in nature, when the sun is in the meridian, even the landscape itself looks flatter than when viewed in the early morning or towards the close of the day.

There are various other positions the animatographist might take up, which would enable him to secure better results than from either of the positions named, but we need only mention one: the best. This is at G, which would be best for several reasons, a few of which we may mention. Because the lighting would be such as to give rotundity to the various objects constituting the picture, investing them with effects of solidity, to be gained from no other position. The approach of remote objects to the nearest foreground would subject them to a constantly enlarging magnitude as regards their respective images upon the film (which is one of the many ocular phenomena capable of suggesting relief). Every moving object embraced, as it passed from J to O, would present to the lens many of its phases, thus making the record a very comprehensive one. Finally, the

main object of interest would be within the range of the lens, from this view point, longer than from any other.

Thus far we have been considering the best *fixed* view point, but it is obvious that if the field of view could be extended whilst the camera was still in progress of operation, in many instances it would be a great advantage. This fact has been realised by manufacturers, who have made provision accordingly by the accessory piece of apparatus called the "Panoramic Base." With such an appliance the camera could be made to embrace the field G, H, I. Thus, whilst the main object of interest passed from J to N,

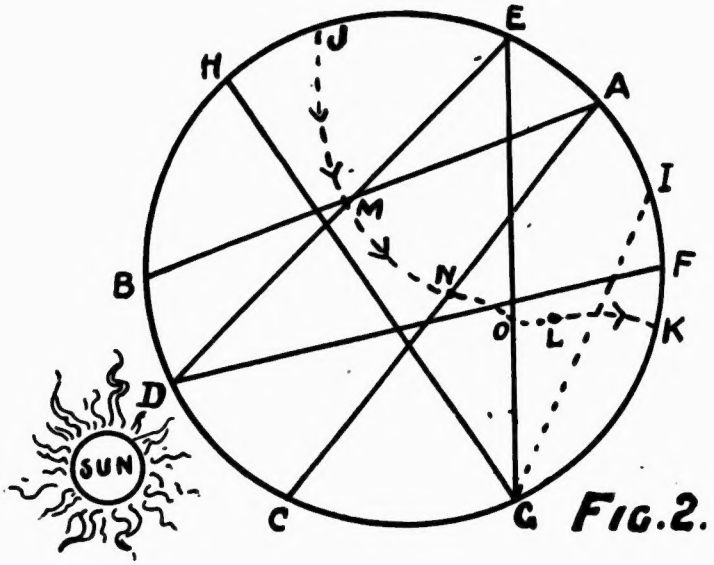


FIG. 2.

the camera would be kept in a stationary position; and then, as the said object of interest began to move still further to the right, the camera would be turned on its axis in a right hand direction. In this way the subject is followed up to any desired extent, so that the field covered in the complete operation would be widened from its otherwise limited angle G, H, E, to the more extensive field G, H, I.

It often happens that a procession is delayed on its way, and many instances could be related of how, to the joy of the operator at the camera, the halt was made just as the celebrity of great importance came opposite the camera, and by making use of the "Panoramic Base" the camera has been swivelled round, and the celebrity (indicated at L in the diagram) has been kept in view for a period of some minutes, making possible a unique and much desired record.

Imagine, then, the feelings of the non-up-to-date animatographist, who, not possessing a "Panoramic Base," and who had taken the procession as it passed from J to O, had perforce to content himself as best he could with a visual embrace of the celebrity, knowing that the imagery now depicted upon his troubled retina was there only to fade away again, whilst the means of a permanent record, the retina (film of his camera), stood idly by.

Animatographists cannot afford to neglect attention, not merely to the last remarks in the present chapter, but also to those in reference to selection of lighting and view point.

In the early days of the Living Picture Era, shadowy and otherwise defective results upon the lantern screen passed in virtue of the great novelty of seeing pictures apparently alive. Now the general public are more extravagant in their ideas—more educated in the art of technical analysis, so that the time of shade and defect has passed, to give place only to the work of experienced and skilful operators.

(To be Continued.)

Stereoscopic Notes.

The Natural Stereoscope.

This is the name given to a new stereoscope of the reflecting type, now selling by Mr. W. Tylar, of 41, High Street, Aston, Birmingham. As shown in the annexed cut, the stereoscopic slide is placed facing two inclined mirrors. The observer looks over the back of the view, as shown, and sees

apparently beyond the mirrors, a combined or compound image in stereoscopic relief. By this arrangement the eyes are permitted to converge in their natural manner, whilst no adjustment for focussing purposes is needed. We have inspected views in this instrument, and find that the name *Natural* is well merited, there being quite a decided consciousness of ease to the eyes whilst inspecting the pictures.

The Stereo-Gothard Attachment.

Although the American pattern stereoscope, as designed by Oliver Wendell Holmes, is more convenient in many respects to the old box pattern of Brewster, the latter had the advantage of shutting out all light except that required for the inspection of the pictures. We now learn of a combination of the two under the above title, and whilst we cannot go so far as the inventor in claiming a new era in stereoscopy by its introduction, we certainly consider it a good idea. Its general appearance is not exactly neat, but its efficiency compensates for any ugliness its outward aspect may present. Imagine a Brewster stereoscope without lenses, fixed in the place of the view holder of an American scope, and you have a fair idea of the purpose and appearance of this instrument. It should be mentioned that the views issued with the Stereo-Gothard form a combination of opaque and semi-transparent pictures. When inspected by reflected light, by having the top of the box open, the views present the appearance of the ordinary silver print without colour; on closing the top and inspecting the pictures by transmitted light, the semi-transparencies at once appear in colours, in addition, of course, to possessing the usual stereoscopic effects. The publishers are the American Stereoscopic Company, 725, Broadway, New York.

"A Photographic Tour to Dublin."

This is the title of an illustrated lecture now circulating by the United Stereoscopic Society. Mr. A. J. Snow, of 84, St. Andrew's Road, Walthamstow, is the secretary.

Prizes for Stereoscopic Work.

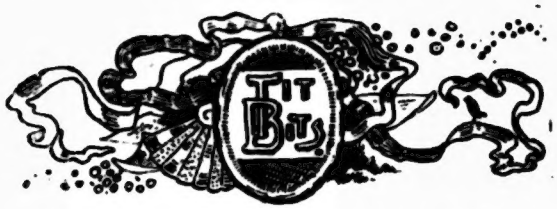
In connection with the Leicester and Leicestershire Photographic Society's Exhibition, a framed plaque, bronze medal, and certificates will be awarded, in the Open and Members' Classes, for sets of four stereoscopic slides. Further particulars and entry forms may be obtained from the Exhibition Secretaries, 18, Market Place, Leicester.

A Stereoscopic Range Finder.

A very clever method of estimating the distance of objects has been conceived by two German gentlemen, which in principle is somewhat similar to the old "Telesterescope" of Claudet in 1860. As the new instrument is fully described under Patents No. 21,887, we need make no further reference to it here.

The Stereo-Photo-Duplicon.

Mr J. Fallowfield, of Charing Cross Road, London, is placing on the market an instrument by which the dissimilar pair of pictures for the stereoscope may be obtained simultaneously in any camera having but one lens. Its principle will be understood by reference to the cut. Suppose the object to be taken to be situated at E, E, the camera at D, and lens at C. By reflection two phases of the object are secured thus:—by reflection from the mirrors A A to B B, and from thence through the lens to the sensitive plate. The advantages claimed are: no transposition required when printing from negatives obtained; no division in the camera needed; any separation of the companion images instantly obtained by varying the angle of one of the outside mirrors camera transformed from an ordinary to a stereoscopic one in a few seconds.



Lady Entertainers.—It is not often one gets the opportuni y of being entertained with an exhibition of pictures, exclusively the work of ladies; and it is with pleasure we are able to report an instance in the case of the Misses Tomlinson, of Fishbourne, who recently exhibited at the Institute, Chichester, the results of their summer work. The subjects were chiefly of children arranged to picture such subjects as "Little Bo-Peep," "Buttercups and Daisies," "Little Jack Horner," "The Babes in the Wood," etc., etc. Other ladies will do well to emulate the example set by Miss Ella and Miss Agnes Tomlinson. Press-the-button work is no doubt fascinating as a start for photography, but to ensure a permanent interest, one needs to study the art and deliberately compose a subject; such is evidently the practice of the ladies named.

"In Birdland with a Camera," is the title of a lecture by Mr. O. G. Pike, and it is illustrated with over a hundred lantern pictures from photographs taken by himself.

Missionary Work and the Cinematograph.—Sheffield residents have recently been able to appreciate the progressiveness which animates the officials of the Church Missionary Society. By the liberality of some anonymous supporter, the Society has been enabled to obtain a collection of extremely interesting animated pictures of Indian life and religious rites and features of missionary work in India. These gave unbounded delight to a great audience in the Albert Hall. The lecturer mentioned that great difficulties had attended the obtaining of the animated pictures, and they were selected not for sensationalism, but to show things in India exactly as they were. The pictures reproduced street and bazaar scenes in Bombay, life in Christian schools, lepers in their hospital, religious rites, a caravan, etc.

Universal Lantern Slide Developer.—What has been termed a universal developer for lantern plates and transparencies is a formula due to Mr. Alfred Stieglitz, of New York, and consists of water to make 20 ounces, hydroquinone 100 grains, sodium sulphite crystals 400 grains, sodium carbonate crystals 400 grains. This developer, with most brands of plates, is capable of rendering the image in a great variety of colours according to the exposure given and the addition of bromide of potassium. For cold tones the plate is exposed for only just the right time, and is developed with one part stock solution, one part water, and one or two drops of a 10 per cent. solution of bromide. For warm tones increase the time of exposure and use a more diluted developer, at the same time increasing the proportion of bromide solution up to perhaps fifteen or twenty-five drops.

"The Optical Lantern." — Messrs. F. Mottershaw and G. H. Bagshaw gave a practical demonstration on the working of the optical lantern at the monthly meeting of the Sheffield and Hallamshire Photographic Society. Mr. Mottershaw explained the advantages of the various focus lenses, and the distances required between the lantern and screen, and exhibited and explained the blow-through jet and mixed jet. After an explanation of the various gases, Mr. Bagshaw proceeded to show the members how to adjust the jets, centre the lime, and generally instructed them in the working of an optical lantern.

Promoters of Lantern Lectures will be interested to hear that lantern slides showing places of interest on the London and North-Western line, are available for the purpose of illustrating lectures, etc., and a list of slides, and the terms on which they are loaned, can be obtained on application to the Company's agents, or to Mr. R. Turnbull, superintendent of the line, Euston Station, N.W.

Cinematograph Case at Paris.—Judgment has been given in the action brought by Dr. Doyen, the well-known surgeon, against certain manufacturers of cinematograph films. Dr. Doyen, for scientific purposes, had certain operations, performed by himself, cinematographed. Some time afterwards he was surprised to learn that these films were being sold for public exhibition, and he at once took legal proceedings. The court has now decided that Dr. Doyen is the sole proprietor of the films, and that he can prevent them being exhibited against his wish. It also found that he had suffered moral detriment through the films being shown at non-scientific gatherings, and the defendants were ordered to pay damages. Two of them will have to pay the Doctor 8,000f., another 500f., and a fourth 200f.

"A Lantern Tour in Manxland," is the title of a set of slides and reading, which are lent free of charge by the Official Information Department for the Isle of Man (established by the Manx Government). Particulars may be obtained from the Secretary, 2, Coronation Chambers, Douglas, Isle of Man.

"Midst Ice and Glaciers."—On February 1st, Mr. Carus Wilson lectured on this subject at the Council Chamber, Salisbury. After describing what ice was, and giving a practical demonstration of its production in the form of ice cream, the lecturer proceeded, by means of lantern pictures, to show his audience how the glaciers were formed and regulated; how they became split into moraines, crevasses, and seracs; how they formed rivers and valleys, ground down sides of mountains, ploughed through forests of trees; how they affected the transportation of huge blocks of stone, and poised them in unexpected positions; and finally, how Icelandic and Norwegian glaciers broke off into icebergs of enormous size, and how they found themselves at last in the open sea. The lecture was greatly appreciated by the crowded audience, and great credit is due to Mr. E. Baker, for the excellent manner in which he manipulated the lantern.

The Chronophone has been well received at the Winter Gardens, Bournemouth, during the past month, and great interest was evinced in the talking and singing pictures.

Lecture by the Editor of "Photogram."—At Maidstone, Mr. H Snowden Ward, F.R.P.S., vice-president of the Dickens' Fellowship, delivered a lecture entitled: "With the Camera in Dickens' Land." With the aid of very beautiful slides, an interesting description was given of relics and places immortalised by the great author.

Subterranean Wonders.—A special public gathering, under the auspices of the senior branch of the Hastings Natural History Society, was held at the Holy Trinity Parish Room, where a limelight lecture, "Marvels of the Subterranean World: the Jenolan Caves of New South Wales," was given by Mr. Fredk. Lambert, F.R.G.S. The lecture was a description of a visit by Mr. Lambert and two friends to the Jenolan Caves situated in the heart of the Bluestone Mountains (New South Wales), a distance of 66 miles from Sydney, and were described by Mr. Lambert as the most beautiful caves in the world. Although very little known in England they are famous throughout the Australian continent, and are worthy to rank among the foremost natural sights of the world. Before reaching the caves themselves, the audience were afforded a glimpse of the beautiful Australian scenery. A unique feature of the lecture was a patent crystalline screen, the invention of the lecturer. It conveyed to the audience in a marvellous manner the dazzling nature of the limestone formations in the caves. Mr. A. Miles ably manipulated the lantern.

Cinematograph Exhibition.—At the Salvation Army Citadel an exhibition of animated photographs was given recently by the Salvation Army's cinematograph. The building was packed. Nearly 3,000-ft. of films were put through the machine, including the General receiving the foreign contingents which took part in the great International Congress, beautifully coloured photographs of foreign S.A. bands, and the funeral procession of Mrs. Booth-Tucker. Captain Narroway, who is travelling the country with the lantern, was the operator.

Theatre Services.—The use of the lantern and the cinematograph in religious services is becoming quite common. Not only in after-services, mission services, and special services in poor districts, but also in the ordinary services of the sanctuary, pictorial teaching is coming into vogue. Whatever objection applies to the use of the lantern in the regular services of the Church, there cannot be any objection to its use in services held in theatres and other public buildings. Dr. Arthur G Rogers has achieved a striking success with a series of services of this kind at the Londesborough Theatre, Scarborough. The services are held on Sunday evenings, and the attendances have exceeded all expectations.

Least Harmful Light for the Eyes.—The injurious effects of light on the eyes are found to increase with the number of ultra-violet or chemical rays contained. This is the conclusion of Dr. A. Staerkle, of Basel, who shows that petroleum is the least harmful light, and is followed in order by gaslight, electric light, incandescent gaslight, and acetylene, the last-named being most harmful. Thick coloured glass—gray-yellow, red or green—lessens the injurious rays.

The Ipswich Camera Club had Mr. A. W. Green of (J. J. Griffin & Sons), lecturing to them recently on the subject of enlarging, with a very simple form of apparatus supplied by that firm. He also demonstrated the toning of bromide prints both with sulphur and with uranium.

At the Anthropological Institute, accurate pictures of the corroborees of the tribes of the Torres Straits were given by means of the cinematograph. This is what is known as scientific corroboration.

"The River Thames," is the title of a lecture by Mr. H. Gosling, L.C.C. The object being to interest people in the Thames, so as to encourage them to patronize a new service of boats to be run by the London County Council. The lecture is illustrated by a large number of beautiful lantern slides, showing various parts of the Thames from the Nore to Woolwich.

Defects in Lantern Slides.—Some lantern slides have been sent to me, the views on which present a misty, matted appearance; and I am asked to give the explanation for this occurrence. The sender states that the slides were all right until put into the lantern. The cause of these slides being spoiled is simply that they were bound up before the gelatine film was perfectly dry. It is not enough that lantern slides be apparently dry before the cover glass is secured in position, they should be treated to a gentle heat for some time before binding them up. It is surprising what a degree of heat gelatine will stand when it is perfectly free from all trace of water; but let heat be applied when the slightest degree of moisture is present, and the result is a sizzling or frying effect, which quite destroys the image, as in the case of these lantern slides.—*Clifton Chronicle.*

At the London Polytechnic, Mr. Malden has added the additional attraction of animated pictures to his lecture, and these are produced by the famous Polytechnic Cinematograph. The wonders of animated photography were first brought before the London public at this Institution, which has now added all the latest improvements, and the unanimous opinion of the Press has been, that the animated pictures of the Polytechnic are the best and freest from flicker of any exhibition. The triple lantern and cinematograph is under the direction of Mr. Tom B. Mercer, who has been connected with the Polytechnic pictures from the commencement.

Another use for the Cinematograph.—Mr. Charles Urban, never behind hand in seizing every opportunity that presents itself for making the Bioscope popular, has, by means of his splendid lens used on his recent trip to America, successfully photographed the ship scene in Mr. Tree's play, "The Tempest." As the company now tour the country, there will be no need for them to carry the cumbersome stage property belonging to this scene. The Bioscope will do the work of depicting this scene by projections from behind the screen. The audience, however, will not be made painfully conscious that they are looking at animated pictures, as the colouring of the films and various other technicalities we need not mention, serve to produce the illusion of reality, equal, if not better than did the original mechanical contrivances.

Halation in Lantern Slides.—Most photographers know that in taking a photograph against the light, opaque objects will be surrounded by halation, unless a backed plate is used. Comparatively few remember that the same objectionable effect will be produced when making lantern slides, unless similar backing of the plate is done.

The Gas Gave Out.—Mr. J. H. Walker, F.R.H.S., the expert of the Northamptonshire County Council, delivered a lantern lecture on "Practical Gardening" at Rugby last month. A very able and instructive lecture was brought to an abrupt termination through want of gas. Mr. E. J. Jackson, assisted by Mr. Humphrey, manipulated the lantern.

The Gardner-Brown Bioscope and Variety Company have just arrived at Gibraltar from Malta, and are giving excellent entertainments nightly to our soldiers and sailors and the garrison generally, under Sir George White's patronage. The Bandmann-Dallas Opera Company commenced a short season on the 28th ult.

The Tibet Mission.—The lecture of the month has been that of Sir Frank Younghusband on the unveiling of Lhassa. At the Royal Geographical Society a learned and distinguished company assembled, and the vivid word pictures were rendered the more interesting by the aid of excellent photographic views of the marvellous scenery of the country thrown on the screen. The views of the Forbidden City were full of interest, and the various types of the chief men produced much amusement.

The Coliseum—London's latest huge amusement temple—follows the lead of nearly every house where a variety entertainment is given, and uses the optical lantern and living pictures for one of its "turns." The series of slides (which, by-the-way, are shown on the fireproof curtain) used to illustrate the songs are very poor for such splendid surroundings. One looks for something above the ordinary, but those shown are very commonplace, and we suggest that the management should raise the standard of the views to the level of the rest of the entertainment. Of the animated pictures we have nothing to say unless it is that these are too few.

Education and Industry in America.—The large hall of the Co-operative Society, Sunderland, was crowded to listen to a lecture on "Education and Industry in America," by Councillor J. Whitburn, a member of the Moseley Educational Commission, 1903. Mr. Whitburn alluded to the thorough-going system of manual training in the American schools, which resulted in giving the youth a taste for mechanics, besides enormously strengthening the demand for a technical training later on. He referred to the wonderful enthusiasm for education which characterised the American people. Evening classes were held everywhere, in the schools, colleges, churches, and factories, and all were crowded on the first or second night of the winter session. The lecture was illustrated by a large number of beautiful slides.

CORRESPONDENCE.

[Letters which are of general interest to our readers are always welcome. They should be short and to the point, and must be accompanied by the name and address of the writer, as a guarantee of good faith, though not necessarily for publication. The Editor is not responsible for the opinions of his correspondents.]

EXAGGERATED NEWSPAPER REPORTS.

Sir,—I was very surprised to see in your journal the account of the fire at the Salvation Army Barracks, Dudley. The papers published a lot of untruths from beginning to end. They said that the audience was mainly composed of children, but there were not seventy children in the audience, which was, as near as I can tell, about eight hundred. As to the lantern being destroyed, I was showing to a crowded audience at Town Hall, Holly Hall, Dudley, the following night. The fire did not last three minutes, and could have been put out but for the crowd, and they hampered us, but there was no harm done to anyone. — Yours, etc., JAMES HENRY BLISSE.

SLIDE CLUB IN NORTH LONDON.

Sir,—I wish to join a lantern slide club, and should be obliged if you could give me the address of the secretary of a club in North London.—Yours, etc., J. DANES, 2, Fortess Road, N.W.

[We do not know a club for slides only, but you might find the North-West London Photographic Society, at 17, Camden Road, useful. The secretary is Mr. H. S. Date, 3*a*, Woodsome Road, N.W.—ED.]

AN IMPROVED SPOOL.

Sir,—From your magazine I have learnt one or two good "wrinkles" that have proved useful to me in my show of moving pictures, and I should like to reciprocate by suggesting an idea, which to me seems practicable and necessary, and which the trade may produce. We all know the advantage of extra reels or spools for the film, but how much easier it would make our work if these were made so that one side was entirely detachable, and the used film could be slipped off the hub without the trouble of rewinding. It could easily be done by letting the side fit the hub with a spring catch. I find the varying sizes of the holes in the hub a great nuisance, some of the makers have more than one size. Why is this? —Yours, etc., PRACTICABLE.

LIVING PICTURES AND POLITICS.

Sir,—I am highly pleased with the OPTICAL LANTERN AND CINEMATOGRAPH JOURNAL. It is just the journal that persons who are interested in cinematograph and lantern work have been looking for for a long time. For the past five years I have used the cinematograph (Walturdaw Bioscope) in connection with my political meetings in different parts of the country, and have proved it of great value, not only in the way of entertainment, but also for imparting instruction on political questions of the day. I am thoroughly convinced that there is a wide opening for the cinematograph in the political world.—Yours, etc., F. GEO. PYNE, Organizing Secretary and Registration Agent, North-west Devon Unionist Association.

ON THE DEVELOPMENT OF LANTERN PLATES.

By Rev. T. Perkins.

ALMOST any reducing agent that can be used for the development of negative plates—pyrogallic acid, hydroquinone, metol, eikinogen—will serve for the development of lantern slides. My own favourite of these is hydroquinone, as it is easy to work, and by its means, without any subsequent toning, a great variety of colours—black, brown, purple or red, can be produced. There are three main ingredients in the solutions: (1) hydroquinone, with a preservative, either sodium sulphite or potassium metabisulphite; (2) caustic soda or caustic potash; (3) potassium bromide.

It is a safe rule if we use but one brand of plates, to adopt the hydroquine formula given by the makers of that particular kind of plate. The formulæ of different makers are given in such different ways that comparison becomes rather troublesome, one maker for instance may direct that equal quantities of his stock solutions are to be mixed, and the developer is then ready for use; another, that the stock solutions when mixed are to be diluted with water. It is a pity that all formulæ are not given in the same way, by merely stating how many grains of each constituent are to be present in an ounce of developer ready for use. I have analysed some of the leading makers' formulæ, and find that the number of grains of hydroquinone present in an ounce of developer varies from 2 to 4. Much greater variation is found in the amount of the other two components. These two are: an accelerating agent—the caustic soda or potash; and a restrainer—the potassium bromide; so that if more of one is used, then more of the other is required to keep it in check.

The formula I use myself is:—

A.

Hydroquinone	...	..	½-oz.
Potassium Metabisulphite	...		½-oz.
Potassium Bromide	...	...	40-grs.
Water	...	...	10-oz.

B.

Caustic Soda	...	...	½-oz.
Water	...	...	10-oz.

C. (*for modifying tones.*)

Ammonium Carbonate	...		½-oz.
Ammonium Bromide	...		½-oz.
Water	...	...	10-oz.

For use, take ½-oz. of A, ½-oz. of B, and ½-oz. of water. It will be seen that if 10-oz. of A, 10-oz. of B, and 20-oz. of water are mixed, the proportion will be the same. That is, in 40-oz. of solution there would be ¼ of an ounce (109⅜ grs.) of hydroquinone and of caustic soda, which works out to 2·73, or about 2¾ grains per ounce, and of potassium bromide 1 grain.

This developer gives a warm black tone on most plates if the exposure has been correct; by increasing the exposure and adding to the ounce of developer some of the C solution, the colour can be warmed.

Thus if 1 minute were required for a black tone,

2 minutes and 30 minims of C would give a brown tone;

5 minutes and 60 minims of C would give a purple tone;

10 minutes and 120 minims of C would give a red tone.

This refers to plates made to produce cold or warm tones at will.

The method I generally adopt, at any rate for the first exposure, in a batch of slides, is to aim at a brown tone, and develop in a solution arranged to give this colour; but at the same time I have ready mixed an ounce of solution without any of solution C. If I find the image come up too slowly, I transfer the plate from the solution in which it was placed at first into that without any C, which almost always will bring out the image, though it gives it a blacker colour than that aimed at. If, however, the image comes up too quickly, a little more of solution C will retard it and give it a warmer colour.

It must be noted that development proceeds more slowly when solution C is added. Thus to get a red toned slide the plate must remain in the developing solution possibly ten times as long as would suffice to obtain a black tone.

I have found that in frosty weather longer exposures must be given, the cold room, though the solutions be warmed, acting much in the same manner as the addition of C. A variety of colour in a set of slides, shown at the same time, is an advantage, but as a rule black and red, the extremes in the colour scale, should be avoided, various tones of brown are more pleasing. The colour may be modified to suit the subject. A rich warm red would admirably suit a view of a building of red sandstone or red brick, but would be quite out of place in a slide of hoar frost, for which a cold black would be infinitely preferable.

By adopting the method of development described above, it is possible to save nearly every plate from the fate of being simply used as a cover glass.

Temperance and the Lantern. — It is interesting to notice how much more the lantern is now used for promoting Temperance principles. This is doubtless largely due to the fact that the United Kingdom Band of Hope Union, during its fifty years of useful work amongst the young, has kept the lantern to the front, and provided the best Temperance slides, both for sale and hire.

THE CARICATURIST AND THE CINEMATOGRAPH.

PERHAPS the highest use to which the cinematograph could be put would be the reproduction of natural phenomena; unfortunately, however, for the advancement of Science, the majority of mankind prefers passing entertainment to the acquisition of abiding knowledge. Nevertheless, this fact need not hinder the scientist in using his knowledge when designing his apparatus, and by so doing he is able to mystify an audience with seemingly miraculous performances. Indeed it is just by the absolute adherence to the laws of natural philosophy that the most wonderful results have been achieved.

Wonderful as is the ability of the eye to adapt itself to every condition of light, it is not so swift in its activity, as to defy deception, and there is perhaps no instrument that lends itself so well to a variety of optical illusions as does the cinematograph.

The writer records in his note book, that he has seen this instrument used for the exhibition of the "Lightning Artist at Work;" but that the merit of the performance has been somewhat spoiled by the obvious introduction of trickery — such unnatural changes as the sudden vanishing of the drawing papers, and other unnecessary effects, giving the spectators the idea that the whole is a faked affair, rather than a combination containing some genuine work.

Now in view of the little time allowable for a performance of character sketching before the cinematograph camera, the following aids to success are suggested :—

In the first instance we may take advantage of the fact that the lens employed in the camera is not of the achromatic type, and therefore will not photograph any light blue marks that may be made upon a white surface of equal reflecting power. We are led to observe that a set of preparatory outlines in blue crayon may be used by the artist as a guide, when executing the black charcoal sketches before the camera. To be more precise—having decided upon the number and the particular celebrities to be caricatured, these are carefully outlined in blue crayon upon white sheets of paper; their names being written at the top in black. An easel should be used. On the board, the four, five, or six sheets are pinned, the top one having already a caricature drawn upon it in black. This is merely that as many characters as possible may be exhibited at one performance. Assuming that the easel has been set up before the camera, and all is ready for the taking of the negative, the artist steps forward, bows, and motions

his intentions of art, at the same time moving towards the easel, and without loss of time, snatches the top picture from its place, exposing the apparently blank (except the title) sheet that lies beneath. With rapidity out-pacing the dexterity of a Phil May, he dashes off the sketches, and as each arrives at completion tears it from its place. A previously made drawing is revealed as soon as the last sketch is removed from the easel, the subject being an appropriate humorous sketch, bearing the word "Finis," easily readable by the audience, as the artists bows and retires.

FIG. 4.

A few hints for the preparation of the blue outlines may be of service to those not good at original work.

Take as many ordinary lantern plates as may be required, and clear in the ordinary hypo. bath without exposure to light, or development; when perfectly fixed, thoroughly wash and dry. Now select from the current illustrated papers such outlined portraits of celebrities as you think will prove most popular. Lay the glass plate film side up over the illustration, and trace upon the gelatine in Antoine's Indian ink.

Having obtained as many as required, by means of a lantern, project such outlines on the sheets of paper to be used in the performance before the camera, tracing the projected outlines over with the blue crayon before mentioned. The actual work to be done whilst the cinematograph camera is operated, is merely the lining over, with black charcoal, these preparatory tracings. This operation is however best performed in the following way:—Select the softest piece of charcoal obtainable, and rub down on a spare piece of paper, till it has been reduced to a semi-circular stick as shown in the three diagrams, Figs. 4, 5 and 6. Put in the thickest lines with one sweep by laying the stick on its side (Fig. 4). Produce any lines of regular width by drawing the charcoal lengthwise (Fig. 5), and finally make the fine lines by twisting the

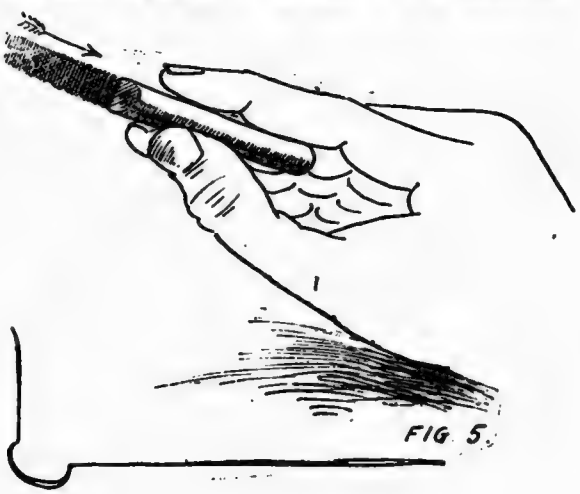


FIG. 5.

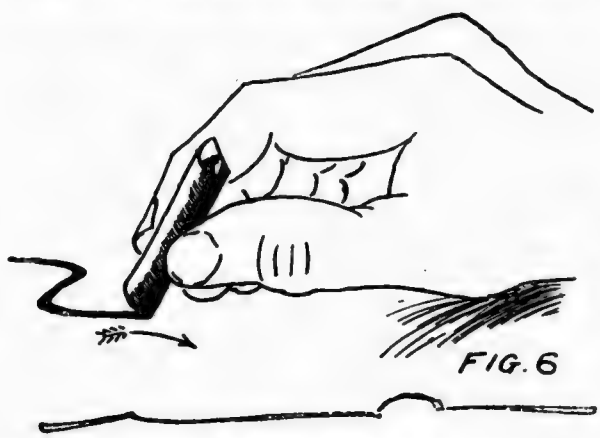


FIG. 6.

stick and using it as in Fig. 6. Should it be necessary, or thought desirable, to tone down more elaborate work, a softener (Fig. 7) may be used, this is composed of a soft piece of rag, stuffed with cotton wool at either end, and tied in the middle.

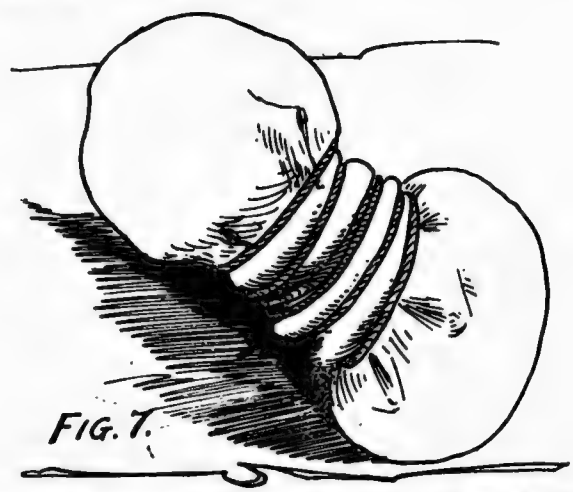
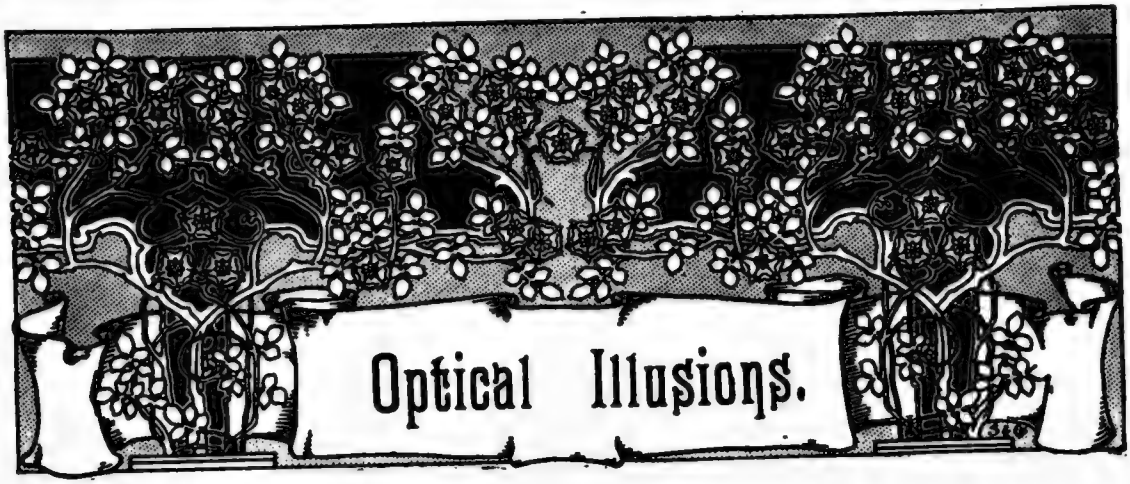


FIG. 7.

An artist with some ability will find the above dodges a great assistance in making his work even more effectual, and by the reproduction of his operations through the cinematograph, he is likely to win a not altogether merited reputation of being dexterous and accurate in his art.



No. III.

By EDMUND H. WILKIE, *Of the late Royal Polytechnic Institution.*

In the last journal I gave a description of the illusion "Metempsychosis," invented by Messrs. Pepper and Walker, as it appeared to the audience, and now propose to go into details showing the construction and working of this beautiful effect.

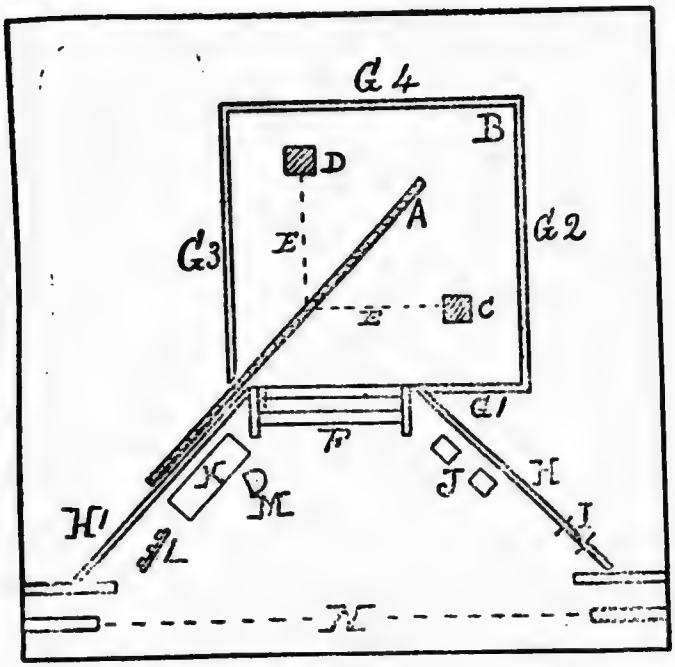


Fig. VIII.

When first produced, the stage was not so elaborately arranged as in the drawing given last month, but was simply closed in, in the shape shown in Fig. VIII., by flat scenes and drapery.

To properly appreciate the description, it will be necessary, in the first place, to turn our attention for a few moments to the diagram, Fig. VIII., as that gives us the whole ground plan, and also the working parts.

At N we have the opening in the proscenium,

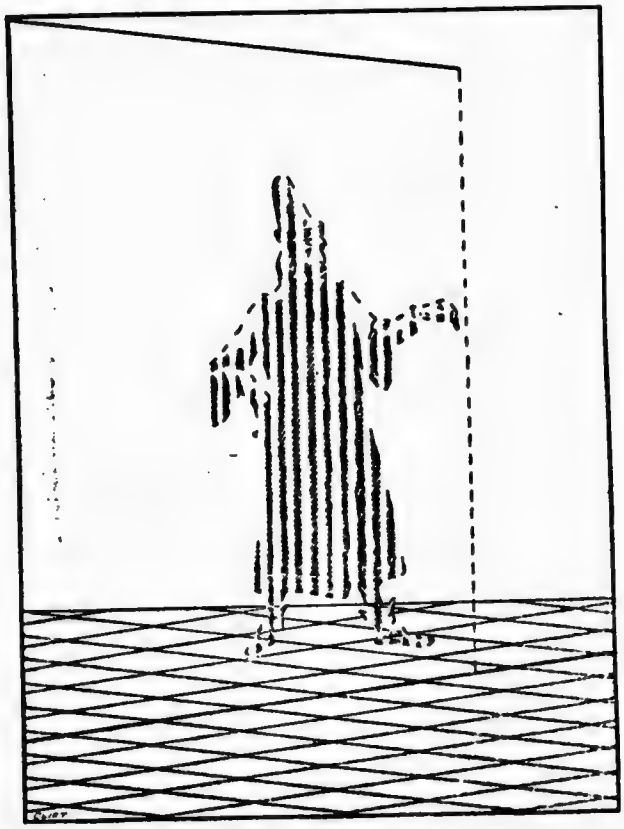


Fig. IX.

H, H being two flats of scenery which close in the stage from the front wings to the steps F, which in their turn lead up to the small chamber of mystery at the back, in which all

the changes occur. The walls of this chamber are G1, G2, G3 and G4. A is a large sheet of silvered glass extending from floor to ceiling, which can be wheeled to and from B on a specially constructed carriage, the glass travelling through a narrow groove in the floor. I must remark in passing, that in order to conceal this groove, the floor was covered with a pattern consisting of diagonal lines crossing each other, one set of lines running parallel with the groove.

Now if this travelling reflector is completely withdrawn, the audience are able to see straight through the entrance of the chamber to the back wall, the chair marked D being in the centre of the field of view. The mirror then being pushed across the chamber, D vanishes from before the eyes of the spectators, and the walls of the chamber at G1 and G2 being reflected at G3 and G4, the disappearance of the chair is the only apparent change.

It will doubtless occur to many that as the edge of the mirror travelled past the chair a hard line would be seen; I mean that there would be no gradual disappearance, there would be a distinct vertical line, which would seem to wipe out the object as it passed along.

To avoid this, the inventors hit upon a most ingenious expedient. They etched vertical lines in the silver deposit on the back of the mirror at the travelling end (that is, the end which passed across the field of view), commencing with thick lines close together, and tapering off to thin lines further apart. Thus the glass at its extreme end was half transparent and half reflecting, giving a very vague and misty appearance to any objects reflected by or seen through it.

In the illustration (Fig. IX.) these etched lines are much exaggerated in size, as it would be next to impossible to reproduce the portrait of the gentleman depicted, in such thin slices as occurred in the illusion. Each line would not be individually perceptible on the stage, but only a general haziness. This appearance is just the same whether the figure is being disclosed by withdrawing the glass (the edge of which is marked by the dotted line) or being reflected from a hidden object by pushing the mirror forward along its groove.

This appearance and disappearance of objects would not, however, present any features of novelty if the illusion consisted in that alone, but I have simply introduced this to give a plain illustration of its working.

Fig. X.

There is one point which we must pay particular attention to, and that is the illumination in the chamber of mystery (a gas jet marked B). This must be arranged so that it illuminates the walls, ceiling, and floor equally on both sides of the mirror; this is extremely important, as a little light more or less on one side of the room would at once show that some change took place as the mirror passed.

If we first place a chair at C similar in all respects to that at D and exactly registered with regard to reflection, we may pass the mirror A to and fro as often as we please without any change being apparent, as the

reflection takes the place of the reality, and we suppose we are still looking at the solid object. It is impossible to place too much stress on this point, as the proper appreciation of all that follows depends upon keeping this fact well before us, and it is to this peculiarity that the illusion owes its greatest triumphs.

When these two chairs are in position, the actor may walk up the steps and sit in the chair to prove that it is a reality, and immediately upon his retiring from the chamber the glass may travel across (the reflection of the chair taking the place of reality). A second actor habited as the spectre then enters behind the glass by a concealed door, and seating himself at D the glass can be slowly withdrawn, the etched portion as it passes between the audience and the spectre gradually revealing him until the reflector being entirely withdrawn the apparition is fully exposed to view, and able to walk about the stage, after which he once more seats himself and disappears.

These conditions being understood, let us take in detail the operations necessary to produce the mysterious effect described last month.

It will be remembered that an artist having purchased a lay figure, two porters bring it to his studio in sections, which are put together, and the whole deposited in the chair D. They retire, the artist falls asleep, the lay figure descends the steps, finishes the outline of a portrait, and ascending to its original position becomes once more inanimate.

To accomplish this the "Property Man" has to be called to our assistance to make two lay figures of papier mache and one suit of plates of the same material, to exactly resemble the lay figures when worn by a living person.

In preparing our entertainment, we first place one of the lay figures in position at C, seated in the chair and facing along the dotted line of reflection E, and the glass being drawn completely off the floor of the chamber, and left standing behind H1, the figure is out of sight from the auditorium.

After the preliminaries have been gone through and the lay figure seated in its place, the glass reflector is pushed across the stage, and the figure removed, its place being supplied by an actor made up to resemble it exactly.

Great care has to be taken in ensuring that the two figures, the dummy, and the actor made up to resemble it, occupy the same positions on the chair, and are in register with the lay figure at C, but even with the greatest amount of pains it is not always possible to avoid a slight difference being perceptible as the glass crosses. The only effect of this, however, is to give an undulatory or wavy motion to the image, which imparts to it the appearance of shuddering.

Directly the actor is in his place the glass is drawn back out of the way, and as by this time the artist has fallen asleep, the weird chords (especially devised to harrow the feelings of all who hear them) are commenced by the musicians, and under their influence the lay figure gradually stands upon its feet, and advancing, descends the steps.

At the Polytechnic Institution the figure was impersonated (or, to be correct, the shell was filled) by Mr. Walter Lightfoot, so long the "Property Man" of the establishment, and although not a trained actor, his performance was realistic in the highest degree. The creaky, jerky, uncertain movements he imparted to the figure were such as we should expect to find were we to meet a wooden lay figure out for a constitutional, more particularly if it had been left in a damp corner for a time; and the effect as it descended the centre of the stage was so great, that many persons, having struggled hard to get into the front seats, appeared to wish they were a little further from the stage.

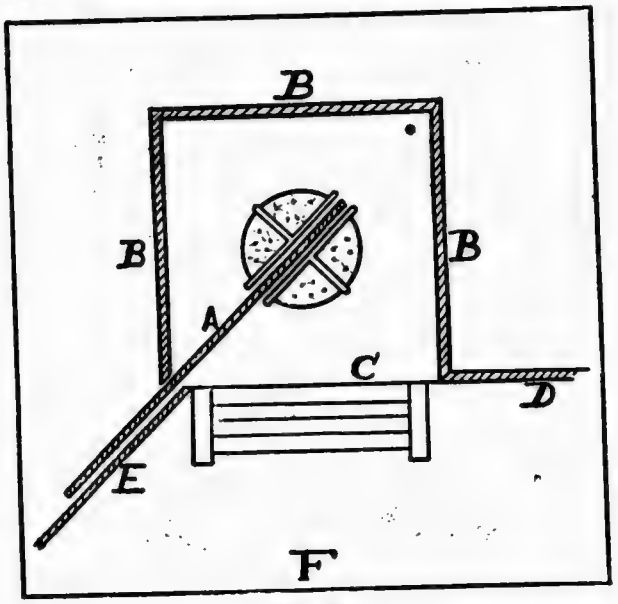


Fig. XI.

After sketching on the canvas standing on the easel, which will be found on the left side of the illustration, the figure retired to its seat, the glass travelled across to hide the change, and the original figure was restored to its place, after which, the glass being once more drawn off behind the scene, the artist could run up the steps and drag the mysterious figure down for dissection. Thus closed one of the best and most striking illusions ever brought before the public.

After a time when it began to be felt that some change was necessary in the programme, an improved form of this illusion was invented

by Mr. Walker and introduced in a musical entertainment from the talented pen of Mr. Burnand, of *Punch* fame, and entitled "Curried Prawns."

It was produced by my old friend, the late Mr. George Buckland, and represented the trials of a gentleman, who, having a party of friends in his house for the purpose of giving an amateur edition of the opera "Faust," indulges too freely in that extremely indigestible dish, "Curried Prawns," and falling asleep immediately after, is visited in his dreams by Mephistopheles, Marguerite and Faust, Mr. Walker's illusion being responsible for the apparitions.

The diagram (Fig. XI.) will show the ground plan of the working parts when arranged for this entertainment. The shape of the scene and chamber of mystery (or changing box) were altered in this case, and by reference to Fig. XI. you will find that the front wall of the chamber marked G1 in Fig. VIII. was removed, and the whole room exposed to the sight of the audience.

In the centre, over the groove, stood an ottoman, which was divided into two parts along the course of the groove, the separation just allowing sufficient room for the passage of the mirror. Although this was regarded as an improvement, yet it will be at once apparent that no changes, such as those mentioned in "The Artist's Dream," could be introduced, as there remained no place behind which the doubles could be concealed.

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OIL LANTERNS IN USE.

THE idea that an oil lantern is necessarily smoky and smelly is based on the fact that it becomes so when improperly used. With due care there is no reason why it should either smoke or smell. Smoking is caused least often by the wicks being turned up too high. Its origin, as a rule, is to be found in a badly-adjusted chimney, or, still oftener, in stopped-up airways, which are only too often choked with match ends, charred wick, and other rubbish. If care is taken to see that every airway is clean and clear, and that the chimney is duly adjusted, it will probably be found that the wicks can be turned higher than ever, and yet the lamp be free from smoke. Smell is due to the diffusion of unburnt petroleum vapour in the room. If a lamp is put away with petroleum in it, the oil will be found to "creep," and the exterior of the lamp, and especially of the burner, will get covered with a film of oil, which, as soon as it begins to get warm, is volatilised and dispersed throughout the room. The same result is obtained when the lamp is not burning at its brightest, as the wicks suck up more oil than is burnt, and its vapour is diffused accordingly. For this reason a paraffin lamp turned down always makes a smell, whereas if it is clean, and is burning at its brightest, it has no perceptible odour. Wicks should never be put into the lamp without being thoroughly dried, and after the first trimming should not be cut again. They ought to burn quite evenly without any further cutting, the charred part being wiped off with a duster from time to time.—*Photography.*

A WONDERFUL BIOSCOPE.

THE bioscope of De Gasparis, which constituted a late striking exhibit in Naples, is a microscope of very long focus, the rack-mounted tube containing a system of achromatic objectives and an eye-piece of wide field. The magnifying power is somewhat more than twelve diameters at a distance of twenty inches. The new instrument gives revelations that are marvellous, as it shows the actions and emotions of such creatures as ants, spiders, and flies in their ordinary undisturbed life, gives wonderfully clear views of the doings of aquatic animals, and enables the medical man to peer into the larynx and other body cavities as never before.—*Science Siftings.*

Queries.

Readers are requested to write each question as concisely as possible on one side of a separate sheet. Name and address to be given for reference. We are not responsible for the opinion expressed. Readers are invited to reply to Queries, and should state number and title of same.

19 Exhibiting.
I am thinking of throwing up my present occupation to go in for the exhibition of living pictures. Any hints from readers who have had some experience in touring the country will be welcome. Is there a place in London where I can receive lessons on the management of the cinematograph? What is the general system adopted by exhibitors as regards booking halls, etc.? Also, is there a guide published on the subject of exhibiting? I have books on the use of the ordinary lantern, but wish to obtain a work on exhibiting films.—CABINET.

18 French Revolution.
Where could I get lantern slides illustrating incidents in the French Revolution and Paris Commune for lecture purposes?—ARCADE.

20 Torn Films.
I have had some of my best pictures (films) torn at the perforations, and after using them a few times these fractures became so serious that the sprocket wheels refused to pass the films through the projector. What is the cause and remedy?—EXHIBITOR.

ANSWERS.

14 Focussing Lantern Lens. — "Omega" will find that the 5 inches and 8 inches are the principal focal lengths of his lenses, *i.e.*, the distance from the optical centre of the lens to the point at which parallel rays entering it will be brought to a focus; or, since the path of rays through a lens can be traced in either direction, the point from which rays must proceed to be rendered parallel by the lens in question. The actual distance to which it must be racked out to produce a distinct image will depend upon the distance of the screen and the size of the disc produced, being less in proportion as the screen distance is increased. As the size of an ordinary lantern slide is 3¼ inches square, the picture upon it is reduced by the binding and mask to slightly less than three inches, on an average, in diameter, and "Omega" will find that in round numbers the screen must be distant from the lantern lens four times the focal length of the latter for each foot of the diameter of the disc. Thus the 5-inch lens would give a disc six feet in diameter on a screen at a distance of 5in. × 4 × 6 = 120 inches or 10 feet; while the 8-inch lens would give a disc of the same size with a screen distance of 8in. × 4 × 6 = 192 inches or 16 feet. If any other sized disc is required, the distance of the lantern from the screen must be changed, or a lens of a different focal length used. His best course will be to arrange the lantern and screen at such a distance as to give the disc required, and then to rack the lens backward or forward until the desired degree of sharpness of definition is secured; care being taken to centre the source of light accurately before inserting the slide, so that the disc on the screen is equally illuminated in every part.—W. H. GOLDING.

15 Binding Strips Springing Off. — Gum arabic is the adhesive most commonly used, whether with the home-made bindings or with those which are sold ready for use. Although the bindings stick readily enough, and seem all that is to be desired when first applied, the heat of the lantern quickly causes the paper to leave the glass. The better plan is to add a few drops of glycerine to a little flour paste, or to one of the commercial mountants, and rub this into the binding, even though possessing a coating of gum. The glycerine absorbs a little moisture from the air, and keeps the mountant in that state of tackiness necessary to retain perfect adhesion to the glass. The heat of the lantern will drive this off each time the slide is used; but before the binding strips off, moisture is again taken up, and adhesion again secured The proportion of glycerine must be small—not more than 10 drops to an ounce of strong mountant.—B.

17 Aphengescope.—Yes, this is a commercial apparatus, and can be obtained to order through any photographic dealer, the makers being Messrs. John Wrench & Son, 50, Gray'sInn Road, London. As it depends for its results on the principal of reflection, it would hardly be suitable for animated picture projection; though it would probably be practicable for this purpose if only a small projection was wished for. I see that a Stereoscopic Aphengescope is referred to under Stereoscopic Notes, page 78, last month's issue; this may interest you.—LIGHT.

16 Various Methods of Diagram Slide Making.—The journal in which "Sketch" probably saw information on this subject was *The Photographic News*, from which I take the following:—

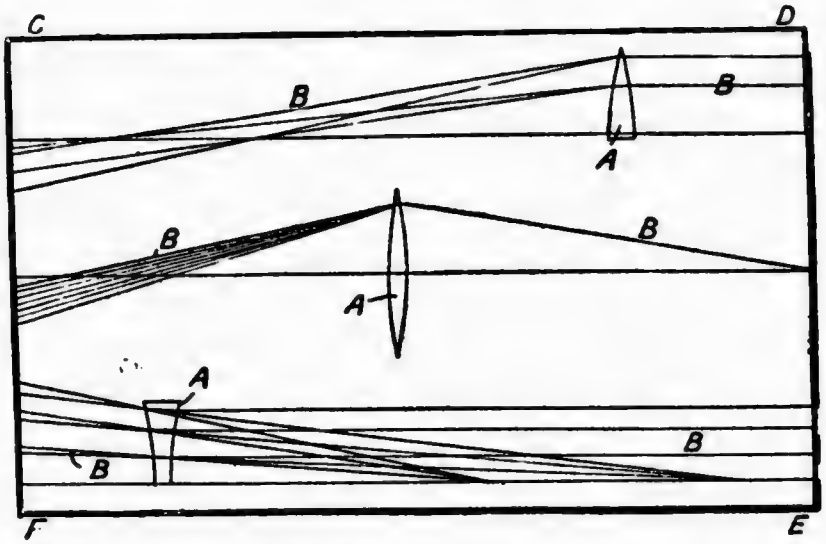
WRITING ON GLASS. — There are many formulæ for inks to be used for making announcement or title slides, writing on negatives, and labelling bottles. I have tried many, but there are none I like so much as the following, which comes, I believe, from France:—Alcohol, 1 oz.; water, 1½ ozs.; shellac, 60 grs.; borax 90 grs.,

with sufficient dye (aniline) of the desired colour added to give it density. There is an art in mixing the above. First, dissolve the shellac in the alcohol and the borax in the water, mix very gradually—almost drop by drop—and apply heat at once should a deposit be formed, and then add the aniline dye. The proportion of the water should be such as to make the ink of a consistency as to flow easily from the pen; some workers, for example, use only one ounce of water, for it is wonderful what a difference a few drops will make.

PEN AND INK PICTURES.—As I never like to waste anything, I turn to account my spoiled films. After soaking the film in a hot solution of sal soda, the emulsion is easily removed by a scraper or the back of a knife, and, if wrinkled, is easily made smooth by a warm, not hot, iron. The cleaned and smooth film I lay over a photograph, and with a fine pen and black ink (preferably an ink made for drawing purposes), go over as much of the outline and shading as I want. After a little practice, although I know nothing about drawing, I find it quite easy to make copies that are really for many purposes much better than the photographs from which they were made. The drawings, of course, print white on a black ground; but I make a negative on a lantern slide plate if small, or a slow ordinary plate if large, and get black prints on a white ground.

DIAGRAM SLIDES.—One can draw or sketch a diagram on a plate coated with black varnish, which will show white lines on a black ground. Use a sharp steel point for sketching or drawing; but, of course, this will not do if you want to trace a diagram from a book. The best of all methods is to get a box of photographic lantern plates, open these in daylight, and immerse in an ordinary fixing solution (hypo 1 to water 4). This will remove all the silver, and after washing the plates they are as clear as clear glass, with a fine even surface of gelatine on one side when dry. They can be sketched upon with an ordinary pen, or a drawing pen may be used. India ink, crimson lake, or Prussian blue may be used, and the drawing or diagram is now on a white ground. It it must be on a black ground, then expose a lantern plate in contact and develop it as for a lantern slide. We have then white lines on dark ground. Strips of thin coloured gelatine may be fixed over certain lines to give colours to certain lines—for instance, "centre lines," &c.—CARTOONIST.

PATENTS.



No. 20,684. Optics, Teaching. SCHOFIELD, J., Ballroyd Road, Huddersfield. September 26.

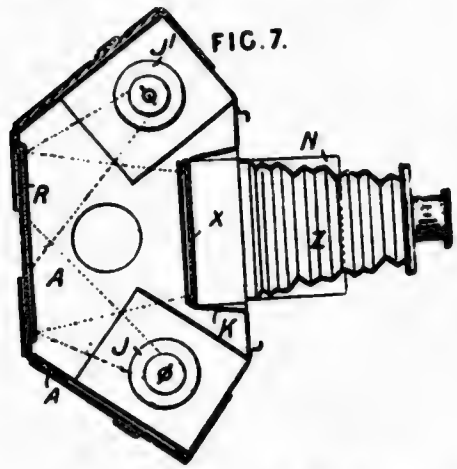
Apparatus or models for teaching optics, shown in the Figure, consist of optical elements such as lenses A, or prisms, &c. of celluloid, xylonite, ebonite, or other transparent, semi-transparent, or opaque material, and black, white, or coloured threads B, to represent light rays. The optical elements are formed of flat, curved, or otherwise formed discs or other parts of celluloid, through, or between, which the threads representing the light rays pass in such a manner as to illustrate the principles of reflection, refraction, aberration, or other optical phenomena. The provisional specification states that wave-fronts may be represented by appropriate celluloid discs or sheets. When celluloid or other sheets are used to represent mirrors, the surfaces may be silvered by means of an ordinary silvering solution. As far as practicable, the parts of the apparatus are constructed and arranged to scale according to optical measure-

ments or calculations. Diagrams and descriptive or tabulated information relating to the optical phenomena illustrated may be placed on the apparatus. The various parts may be mounted on suitable boards or standards, and one or more models enclosed in a glass case, C, D, E, F. Dispersion, achromatism, double refraction, and polarization may be represented in this manner.

No. 21,838. Photography. HUGHES, W. C., Mortimer Road, London, N. October 10.

Enlarging.—A lantern containing two lamps and a reflecting-surface is used for concentrating the light upon the negative to be enlarged. The horizontal section of the lantern body A (Fig. 7), is of an

FIG. 7.

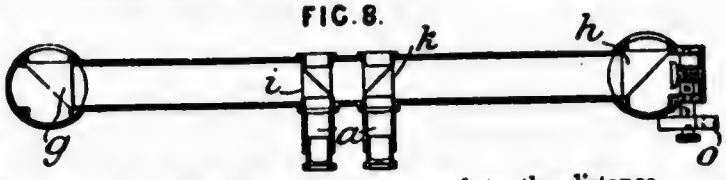


irregular hexagonal shape, the lamps J, J1 being placed in opposite corners. The light from the lamps falling on a reflector R, preferably a sheet of white blotting-paper, is projected on to the negative X supported at the back of a recess K in the front of the lantern. The enlarging-camera Z is supported by a shelf N at the bottom of the recess.

No. 21,887. Range-finders. PULFRICH, C., and KÖNIG, A., Saxe-Weimar, Germany. October 12

This stereoscopic range-finder is based upon the fact that when a binocular telescope, in a focal adjustment, is employed for the observation of an object at a finite distance, the apparent distance of the image seen depends upon the total stereoscopic power of the instrument. This total stereoscopic power, again, is equal to the product of the magnifying power and the specific stereoscopic power, which latter quantity is obtained by dividing the interobjective distance by the interocular distance. When, then, two binoculars, with different total stereoscopic powers, are employed for the simultaneous observation of a distant object by a single observer, he sees two images at apparently different distances, and the differences between these apparent distances depends upon the distance of the object. In the range-finder described this difference of the apparent distances is measured, and thus the distance of the object is determined. Fig. 8 shows a simple form. Total-reflecting prisms *g*, *h*, are mounted at the ends of a tube as shown. These reflect light on to half-silvered reflecting-surfaces, *i*, *k*, mounted in front of the objectives *a* of a telescope of Galilean type. The surfaces *i*, *k*, are formed in rectangular glass blocks, which allow of the direct passage of light, without reflection, to the telescope. The arrangement shown thus forms virtually two binocular telescopes, each with the same magnifying power and interocular distance, but with different interobjective distances.

FIG. 8.



In one case this distance is equal to the distance between the lenses *a*, while in the other it is equal to the distance between the reflectors *g*, *h*. The adjustment for equalizing the apparent distances of the two images is effected by rotating the prism *h* by a micrometer screw *o*. Several other modifications are shown diagrammatically, in some of which the difference between the total stereoscopic powers of the two telescopes is increased, to increase the sensitiveness of the instrument by giving negative values to the magnifying and stereoscopic powers. In some forms, the two images are observed in rapid succession and not simultaneously.

NOTICES.

Editor—Theodore Brown, 34a, Castle Street, Salisbury, to whom all literary contributions, notes, goods for reviews, etc, should be sent.

Publishers.—Heron & Co., 9 & 11, Tottenham Street, W. Telegrams, "Heronicus London." Telephone, 4777 Gerrard.

Wholesale Agents.—F. Brett, 5, Pilgrim Street, E.C. John Heywood, Deansgate, Manchester.

Subscription.—Single Copies, 3d.
Twelve Months, post free, 4/-

Advertisement Rates.—Per insertion, discount for series.

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M.S.S.—M.S. must be written or typed on one side only, with a margin. Typewriting is preferable to hand-written matter, but the latter will do, providing the handwriting is distinct.

Correspondence Column.—Letters of General Interest to our readers are invited, and will be inserted under this head.

Payment for Literary Work.—We do not pay for copy used according to space occupied, but according to value. Payments are made by cheque on the 15th of the month in which the matter appears.

LAST month we concluded our review of the films then upon the market by stating that we soon anticipated a considerable improvement in the interest and qualtity of the films. We are pleased to say our forecast has proved correct, and that now we are able to review a quantity of subjects of great interest, and, taken on the whole, considerably in advance of those previously dealt with.

MR. BROMHEAD, the genial manager of Messrs. L. Gaumont & Co., has been good enough to show us their very latest production, in fact we understood it was the first copy taken from the negative. This film, entitled "The Blacksmith's Daughter," is an animated tale of what frequently occurs in everyday life. The village blacksmith is shown under the orthodox chestnut tree, and his beautiful but inexperienced daughter becomes entangled with the profligate son of the squire of the district. The scene in which Nancy Armstrong, the heroine, elopes with the young squire, is exceedingly well done. There is a strong element of pathos shown in the result of the elopement, after a period of two years, when we see the headstrong girl, in the depths of poverty, in an attic in a poor district of London. After terrible privation, she suddenly makes up her mind to tramp back to the old homestead, and the climax in which the reconciliation is effected between the sturdy blacksmith and his repentant daughter is well worked out.

ANOTHER film we saw at the same time, entitled "The Railway Tragedy," is equally good. Whilst the picture was shown on the screen, our nerves were sorely tried. The scene where the lady who has been robbed in the railway carriage, is thrown out of the carriage, and is seen lying on the four-foot way, to be rescued just in the nick of time before the up-express passes by, is a triumph in this particular branch of photography. The whole film is highly sensational, and we can recommend any exhibitor, looking for a film which will make the audience hold their breath, to purchase this film.

THE third film was entitled "The Love-letter," and should appeal very strongly to the ladies, although whether Eve—who is the heroine—shewed much common sense in giving her father a letter to post intended for her sweetheart, making an appointment for a secret meeting, is open to doubt. We cannot, however, excuse the old gentleman for so far forgetting himself as to open the letter and read the contents. But he does so, and the most curious results follow. The denouement, in which the old man dresses up as his daughter and meets the ardent lover, is well done, whilst Messrs. Gaumont & Co. have been careful to see that the course of true love eventually runs smooth.

THE Hepworth Manufacturing Co., Ltd., have produced a sure winner in their film entitled "Lost, Stolen or Strayed." This film shows a little girl searching fruitlessly for the address on an envelope which she holds, and after asking several persons—who are unable to help her—approaches a villainous-looking fellow who volunteers to lead the way. Instead of doing so, he leads the child into a low quarter of the town, and finally points to a small house as being the address in question. The little girl, in great fear, is about to run away, when the fellow picks her up, and placing his hand over her mouth, carries her struggling into the house, where, picking up a whip, he bids her change her nice clothes for ragged and dirty garments. She is then dragged out and sent to beg in the gutter, all the money thus obtained being handed over to her captor, who flogs her unmercifully if she does not collect enough. One day, when the ruffian is not in sight, the child appeals to a young man who has shown himself charitable, and, telling him that she is the girl for whom a reward is being offered, begs him to rescue her from her terrible plight. He follows her to the man's hovel, and is just in time to prevent her receiving another flogging. Seizing the whip, he turns it upon the brutal man, and soon reduces him to subjection and submission.

A VERY good comic this firm have produced is entitled "The Two Imps," showing the mischievous conduct of two boys, who suspend a kitten from a window on a piece of string, and lower it on to the head of their grandfather, who is asleep in the garden. This old gentleman has had recourse to artificial means to increase his personal beauty, amongst other adornments being a heavy wig. As our readers will doubtless understand, when a kitten or cat is suspended in the air by a piece of string, the animals are

only too anxious to grab whatever comes near them; the "next thing" in this instance is the old gentleman's wig, which is forcibly removed from his head, he at the same time receiving sufficient intimation that it is gone by the claws of the hind legs of the animal. The film is only a short one, but at the same time it is full of life and humour, and is a welcome addition to the comic subjects which are now offered to the public.

THE Hepworth Manufacturing Co. evidently keep a close eye on the market, and move with the times, and are of our opinion that there is a demand for good phantom rides taken from a moving train, and the one they showed us is their latest production of a railway ride through some of the finest parts of North Wales. The surrounding country and scenery is admirably depicted, and we quite agree with these gentlemen that the time is drawing near when subjects like these will meet with public approbation.

THE Warwick Trading Co., Ltd., are right up-to-date with a most wonderfully life-like animated portrait of the late Grand Duke Sergius. We understand that this was secured upon the last occasion on which this unfortunate Grand Duke appeared in his public capacity. Of course, the fact of the Grand Duke Sergius having been cruelly assassinated during the last few days has materially augmented the interest attached to this film. So clear and steady is the picture, that to all intents and purposes, one might be actually on parade at the time, seeing His Serene Highness inspecting the Alexandre Regiment. Accompanying him is the man of the hour in St. Petersburg, General Trepoff, who assumed the command of the city immediately after the recent revolutionary riots.

ANOTHER subject from this firm is unique in its way, as—so far as we can find out—the incident has never been photographed before. We refer to the Dog's Derby—"The Waterloo Cup." This film gives a comprehensive idea of the sport of coursing, a subject with which we believe few Englishmen are acquainted. The crowd standing on the bank is first shown, and the various competing dogs are seen coming on to the course. The greyhounds, with the slipper, Wilkinson, are seen waiting for the hare to come past. The two dogs in the final are seen being slipped and rushing away after "puss." The course is seen with the hare dodging backwards and forwards, closely pursued by the greyhounds, and a good picture of the kill is afforded. As a matter of public interest, we might mention that this subject—although taken in the afternoon at Liverpool—was exhibited at the Palace Theatre in London the same evening, and that Mr. Pawson, the owner of the winner, "Pistol II.", was present that night, and was pleased to compliment the firm upon the pictures they had secured of the event.

THE last film we saw on this firm's premises was one that we predict will have a large sale in this country and abroad. The title itself is most attractive, being "The Death of the Iron Horse, or the Accident to the Up-Express." This practically tells the tale of an engine from the time it starts on its wild journey until it is reduced to a thousand pieces by a disastrous collision. A novelty is introduced into the film by a section of it which is taken from the tender of the express engine, showing the driver of the iron steed, together with the stoker, anxiously gazing ahead to see that the line is all clear, and that the speed at which they are travelling is not unwarranted. The surrounding country is seen rushing past the spectator, whilst trains on the up-line come into view, only to flash by with lightning rapidity. In some manner or other, this firm have succeeded in obtaining a picture of another train on the same line, towards which the unfortunate express is rapidly rushing. A porter springs into the four-foot way and tries to arrest the train's progress by waving a danger flag, but although the driver manages to check the speed of the express to a certain extent, it is too late to avoid a disaster. The last section shows the two engines, terribly battered about, one being off the metals, whilst the other is flung bodily down the embankment. The carriages are splintered to matchwood, whilst wheels and ironwork are twisted into the most fantastic shapes. A big crowd is seen surveying the scene of the disaster, and this film undoubtedly affords the British public an opportunity of seeing what a terrible thing an actual collision on the iron road means. We were assured by the gentleman who showed us the picture that this was an absolutely genuine accident, taken only a few weeks ago at Cudworth, where so many lives were lost, whilst a great number of others were badly injured.

THE Urban Bioscope Co. have been presenting a varied and instructive series at the Alhambra. Those films depicting International Sports are viewed with great interest,

and roars of laughter greet the various accidents which occur in the ski and toboggan races. The Russian scenes were photographed on the identical spots where some of the recent deplorable events took place. Our allies, the Japanese, are well represented on some excellent films. Transport waggons on the march, and episodes in the trenches near Port Arthur during the siege, are realistically portrayed.

THE British Mutoscope and Biograph Co. make a speciality of amusing films at the Empire, and never allow one of this nature to stay on the bill which is not well received. Mr. J. B. Macdowell is to be congratulated on his programme. The film entitled "Personal" gives a wildly exciting representation of a race for a husband, the latter having advertised for a wife to meet him at a certain spot, is horrified at the arrival of about 15 charming ladies, and makes a bolt of it, eventually being run to earth after a smart chase over hedges, ditches, five-barred gates, etc. The first lady took the prize. The "Chicken Thief" film, which is concerned with the mis-doings of two niggers in a well-populated hen roost, has some wonderful effects of moonlight. The film entitled "Animated Picture Postcards," is very striking. A hand places the card down, when hey presto, the lovely actress depicted commences to talk and perform some characteristic action, one can almost read what is being said from the movements of the mouth. I must not forget a film which brings down the house, entitled "I want my Dinner." This represents a sturdy youngster crying for his dinner, and when it is placed before him what a seraphic smile appears, and how we follow every mouthful, and note each ecstatic grimace. Without a doubt the audience consider it one of the best.

THE management at the Palace are up-to-date in their Bioscope productions, and represent the events of the moment, making frequent changes. A football match between "The Old Crocks" of the Stock Exchange and The Baltic, is an amusing film. The motor races at Olympia, and the heats of the Waterloo Cup, are two films of note. Some of the films here are coloured, and the "Fireworks" film is bewildering in its fine effects of colour. "Cairo to the Pyramids," another beautiful film, has good colour effects.

TAKING an impartial view of the films all round, we must say that we are very pleased with the variety and excellence of the subjects seen since our last issue.

THE "IMPRESSIONIST" IN PHOTOGRAPHY.

The literature of Photography at the present time abounds in references to the "impressionist" school of modern artists, and their theories are forced upon the reader at every turn; the photographer who desires to become more than a mere copyist or mechanical drudge being exhorted to follow in their footsteps, and assured that only by doing so can he hope to attain to any worthy result, or to escape the trammels of conventionality or the ignoble paths of the commonplace.

It may be conceded that the mere pursuit of technical perfection and the reproduction of something, without the mind or individuality of the worker being called into play or impressed upon that which he produces, is a somewhat low type of work, and one in which the higher order of intelligence is not called into play, and has little or no part. The photographer who desires to produce anything worthy of himself has much to learn from the artist who looks at nature and human work with the trained and cultivated eye and the refined taste which is able to grasp the general effect of a scene irrespective of its minute details, and to express a thought as well as make a picture. But he who insists on wilfully suppressing detail in order to concentrate the attention of the observer on the general effect alone is wantonly sacrificing truth to fancy, and by his attempts to throw out of focus those details which his lens would render with exquisite perfection if fairly treated, is depriving both himself and those who see his work of that which is the peculiar beauty of photography, namely, its power of using the triumphs of optical and chemical manipulation to render detail without exaggeration, with a degree of delicacy to which the hand of the most skilful artist can never hope to attain.

There is ample room for the exercise of judgment in the selection of the point of view and the parts of the subject to which attention is chiefly directed, while the other features of the scene are kept under subordination; but the minor details all have their place, and take their part in the production of the desired result, and they cannot be neglected, still less wantonly sacrificed, without the entire work suffering serious loss.

Let the photographer, and, most of all the lanternist, who would produce a slide worthy of exhibition, focus most sharply for the principal point of interest, but as sharply as he can for every part.

"The Stereoscopic Photograph."

The quarterly magazine which was originally issued under this title by Messrs. Underwood & Underwood, New York, and at 3, Heddon Street, Regent Street, London, was afterwards named *The Traveller*. Now we learn that it will no longer appear as a quarterly magazine but as a monthly periodical. This, however, is not yet promised for any particular date. We hope it will be devoted exclusively to stereoscopic work when next it makes its appearance. Messrs. Underwood & Underwood have done much towards sustaining a permanent interest in stereoscopy by the introduction of their Patent Map System and Illustrated Stereoscopic Tours.

Messrs. L. & C. Hardtmuth, 12, Golden Lane, E.C.,

Make a speciality of artistically finished, compact sets of retouching pencils. One box combines retouching implements with brushes and spotting medium—the acme of usefulness. The "Artist's" Set is specially attractive, and must be seen to be appreciated.

"Royal" Shutter.

The Thornton Pickard Manufacturing Company are putting on the market a new form of their celebrated roller blind shutters, called the "Royal." The new features are:

all working parts are inside the shutter box, thus being entirely out of the way of the operator, and less susceptible to injury and derangement from accident or other causes. The only projections on the outside of the shutter box are those which must of necessity be accessible to the operator, such as the speed knob and the pointer for altering the shutter from "instantaneous" to "time" and *vice versa*. The shutter is fitted with both pneumatic and finger release.

The Colour-Toning Solutions

Of R. W. Thomas & Co., Thornton Heath, which we mentioned last month, are excellent. We have had an opportunity of trying them on lantern slides, and have found that they fulfil all the claims made for them. By a careful use the most beautiful graduation of colouring can be obtained, such, for instance, as setting sun effects. We are confident that every slide maker who wishes to add the beauty of colour to his work would be glad to have a set of these solutions always at hand. Unlike paints, these solutions enable the artist to blend one colour into another imperceptibly, and for this reason they are eminently suited for landscape work.

Royal Standard Lantern Plates.

Messrs. Cadett & Neall, of Ashtead, Surrey, sent us last month samples of the above. We have made slides from these by contact, and obtained very rich and full range of tones. The grain seems exceptionally fine, and is therefore capable of rendering the sharpest definition.

Wellcome's "Tabloid" Pyro Developer for Lantern Slides.

It is not generally appreciated by photographers that a beautiful golden brown tone may be obtained by the use of suitable pyro-soda developer on lantern plates. For this purpose the following special method of working is most successful: In two ounces of water dissolve one "tabloid" pyro accelerator.

Add five to eight grains of potassium bromide; the most convenient way of doing this being, of course, to use five to eight "tabloid" products, each containing one grain of potassium bromide. Use lantern plates specially prepared for the production of warm tones, give them several times the normal exposure, and immerse them in this solution of accelerator and bromide for one or two minutes. Then pour the solution back into the measure, and in it dissolve one "tabloid" pyro developer. Pour back the mixture and develop in the usual way. The result is a beautiful golden brown tone, which looks exceedingly well in the lantern. Warm black tones are also obtainable with this developer by taking the normal developer as for negatives, but adding "tabloid" ammonium bromide according to the exposure and to the warmth of the black desired.

W. David Ireland, of Cambuslang, Glasgow,

Has recently put on the market a toning solution which he calls "Radium Toner." There is no pretence that this solution contains any of this expensive substance; but we should say its effect upon silver prints is somewhat like radium, difficult to understand. Suffice it to say we find it yields excellent results. We have used it on Kodak Ltd.'s Solio P.O.P., and the tones obtained are rich and beautiful. We have no doubt this formula will be in great demand, as it has the combined advantage of being cheap and efficient.

Catalogues and Books Received.

Wellcome's Photographic Exposure Record and Diary.—The monthly light tables are now transferred to a special section at the end of the book, and are so arranged that, as each month goes by, its light table is removed like the leaves of a calendar, and the light table for the following month takes its place. Opening the book at the end, a glance at the left hand page tells the light value for the time of year, day, hour, and atmospheric condition, whilst a single turn of a single scale of the calculator on the right hand side settles what exposure to give for any subject and with any plate. The exposure record pages are separated from the diary. A number of pages ruled for recording the exposures given when making lantern slides from given negatives will be a boon to careful workers, and should be the means of inducing many to adopt more systematic methods. The speeds of all plates and films have been revised to date. The tables and instructions for time, tentative stand, and other methods of development, for toning, intensification, reduction, etc., remain and serve to complete the value of this compact volume as a pocket encyclopedia of photography.

The Thornton Pickard Manufacturing Company, Altrincham, send us a copy of their new catalogue, containing particulars of this season's cameras, shutters, and accessories. They are placing on the market for the first time the so-called "Royal" time and instantaneous shutter, particulars of which will be found under "Review of Apparatus." The catalogue is as usual fully illustrated with line cuts and process blocks. The reproduction of the picture showing "Portuguese Diving" is a good example of the very rapid work their focal plane shutter is capable of doing.

Mr. S. H. Fry, of 12, South Villas, Camden Square, is already known for his enlargement finishing work. We note from his current price list that he is making a speciality of supplying finished enlargements of so-called "club" pictures at a reduced rate.

Messrs. W. Butcher & Sons, Farringdon Avenue, are issuing a list devoted to picture post card frames and albums. Some of the designs are exceeding pretty, notably "The Colora" and "The Trafalgar." A copy of this list of novelties should be obtained by all dealers who sell picture post cards.

Fallowfield's Courier for the present month is almost entirely devoted to details of the hand and stand cameras offered this season. Dealers should note that when sending their orders to Mr. Fallowfield they may obtain goods manufactured by almost any firm, and thus save the expense and trouble of separate business accounts.

Kodak, Ltd., have forwarded us a copy of their current list just out, which runs to 336 pages. Pages 323-325 will especially appeal to lanternists, as they contain particulars of novel optical lanterns and enlarging apparatus, including the "Southport" enlarging and copying table and screen.

The Supplementary Film List of the Pathe Cinematograph Company, Lambs Conduit Street, London. Amongst other subjects listed may be mentioned "The Famous Fountains of Versailles" (a scene of which we reproduced in last issue), "Excursions through Italy," and comic, trick, and historical representations.

List of Elge Films of Messrs. L. Gaumont & Co. contains a special subject entitled "Nancy, the Blacksmith's Daughter," a complete novel in six scenes.

The Optical Lantern & Cinematograph Journal.

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Stereoscopic Notes
Some Notes on Slide Making
The Photography of Microscopic Objects
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Notices
A Word of Praise
"Chats with Trade Leaders," No. 1—Mr. Chas. Urban, of the Urban Trading Company
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Review of Apparatus
New Films
Our Suggestion Bureau
Tit Bits
Applications for Patents
Catalogues and Books Received
Light and Shade

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Valuable Information from Recognised Authorities.

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The Only Coloured Film in England
An Inch of Negative, by J. Page Croft
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Hints on Cinematograph Work
New Films
Stereoscopic Notes
On Photographing with a View to the Production of Lantern Slides, by Professor Golding
Cinematography in Colours
Unique Pictures at the St. Louis Exhibition
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Apparatus for Science Teaching, by E. D. B.
"The Pictorial Treatment of Subjects"
"Photography as a Method of Pictorial Expression"
Stereoscopic Notes
How to Deliver a Lantern Lecture, by J. W. Wright
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Non-Inflammable Celluloid
Notes for the Non Photographic Lanternist, by J. A. W.
Correspondence
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The Sun and Magnetic Storms
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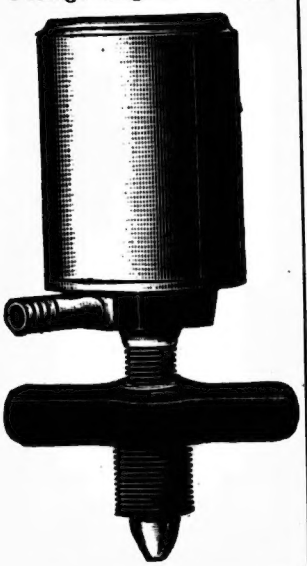

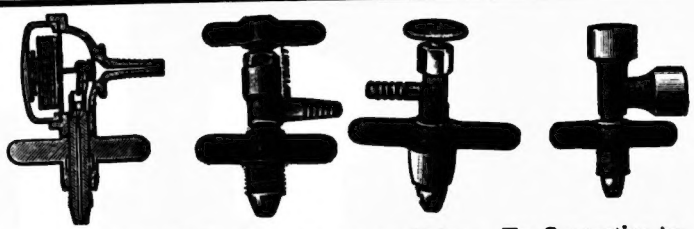

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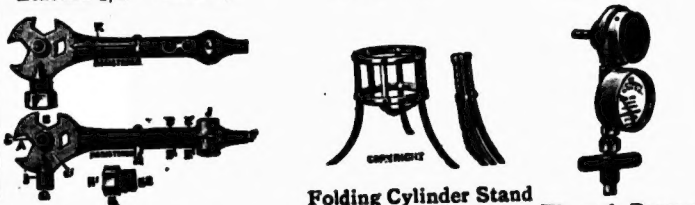

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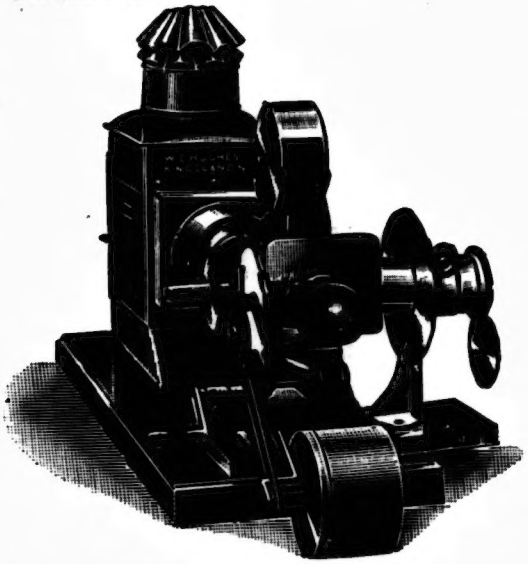

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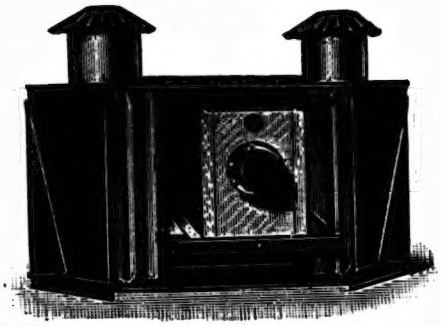

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